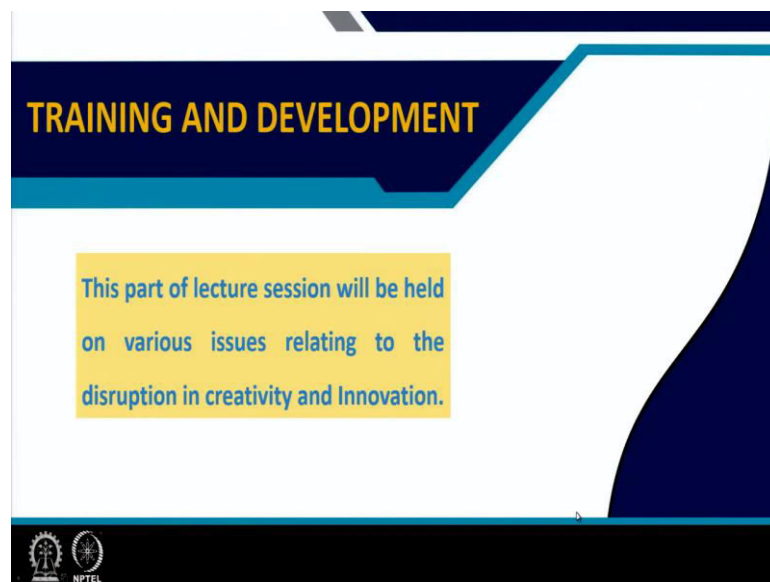


**Training and Development**  
**Prof. Susmita Mukhopadhyay**  
**Vinod Gupta School of Management**  
**Indian Institute of Technology, Kharagpur**

**Module - 12**  
**Lecture - 58**  
**Disruption in Creativity and Innovation**

Welcome to the course on Training and Development, in the model 12 we are discussing on disruptions and managing disruptions in organization through training and development. In the lecture 2 of the module, we are going to discuss on Disruption in Creativity and Innovation.

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So, this part of the lecture session will be held on various issues relating to the disruption in creativity and innovation.

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The slide features a central yellow box with the following text:

**Creativity:** It means a belief in new idea and making them into reality in the forms of products, goods or services provided by the organisations in the market place. It helps to solve problems, increasing efficiencies and enhancing overall effectiveness.

**Innovation** is the process of making changes, large and small, radical and incremental, to products, processes, and services that results in the introduction of something new for the organization

On the left, an orange arrow points to the text with the words "Creativity and Innovation". The background includes icons of gears, a hard hat, and an atom. A video feed of a woman is in the bottom right corner, and the NPTEL logo is in the bottom left.

Creativity and innovation though we utter these two terms like simultaneously, but there is subtle difference between these two terms. So, first we will elaborate on the concept of creativity and innovation. Creativity: it means a belief in new idea and making them into reality in the form of products, goods or services provided by the organization in the market place. It helps to solve problems, increasing efficiencies and if enhancing overall effectiveness.

Innovation is the process of making changes large and small radical and incremental to products processes and services that result in the introduction of something new for the organization.

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The slide features a blue header and footer. The main content area is white with a blue background on the right side. On the left, there are icons of gears and a hard hat. A yellow arrow-shaped box contains the text 'Creativity Training'. To its right is a yellow text box with two paragraphs of text. Further right is a small video inset showing a hand holding a small object. At the bottom right, a woman is visible in a video feed. The NPTEL logo is in the bottom left corner.

**Creativity Training**

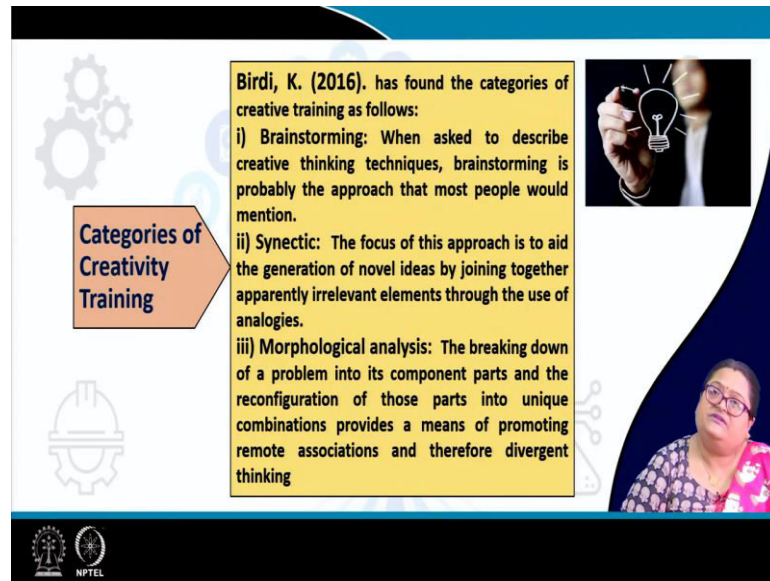
Creativity training can be defined as instruction to develop an individual's capability to generate novel and potentially useful solutions to (often complex and ill-defined) problems.

The support for creativity training appears to vary widely from country to country.. The perception that creativity training is widespread in organisations is to some extent supported by the evidence

So, if we are talking of the contribution of training and development, we will start for disruption and managing disruption creativity training is a very important part of it. We will be discussing on the creativity training now.

Creativity training can be defined as an instruction to develop an individual's capability to generate novel and potentially useful solutions to often complex and ill-defined problems. The support for creativity training appears to vary widely from country to country. The perception that creativity training is widespread in organization is to some extent is supported by the evidence.

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The slide features a central yellow text box with a black border. To the left of this box is an orange arrow pointing right, containing the text 'Categories of Creativity Training'. The text box contains the following text: 'Birdi, K. (2016). has found the categories of creative training as follows: i) Brainstorming: When asked to describe creative thinking techniques, brainstorming is probably the approach that most people would mention. ii) Synectic: The focus of this approach is to aid the generation of novel ideas by joining together apparently irrelevant elements through the use of analogies. iii) Morphological analysis: The breaking down of a problem into its component parts and the reconfiguration of those parts into unique combinations provides a means of promoting remote associations and therefore divergent thinking'. To the right of the text box is a small image of a hand holding a glowing lightbulb. Below the text box is a small portrait of a woman with glasses and a pink patterned top. The slide also includes decorative gear icons in the top left and bottom left, and the NPTEL logo in the bottom left corner.

**Categories of Creativity Training**

Birdi, K. (2016). has found the categories of creative training as follows:

- i) Brainstorming: When asked to describe creative thinking techniques, brainstorming is probably the approach that most people would mention.
- ii) Synectic: The focus of this approach is to aid the generation of novel ideas by joining together apparently irrelevant elements through the use of analogies.
- iii) Morphological analysis: The breaking down of a problem into its component parts and the reconfiguration of those parts into unique combinations provides a means of promoting remote associations and therefore divergent thinking


The categories of creativity training Birdi, K in 2016, has found the categories of creative training as follows. Brainstorming: when asked to describe creative thinking techniques, brainstorming is probably the approach that most people would mention. Synectic: the focus of this approach is to aid the generation of novel ideas by joining together the irrelevant apparently irrelevant elements to the use of analogies.

Morphological analysis: the breaking down of a problem into its component parts and the configuration of those parts into unique combinations provide a means of promoting remote associations and therefore, divergent thinking.

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**Categories of Creativity Training**

- iv) **Lateral thinking:** The approach defines vertical thinking as that based on developing logical linkages while lateral thinking involves a complete shift in thinking or perception around a problem.
- v) **Inventive problem solving:** This approach deals the intention of creatively invigorating the engineering design and problem-solving domain.
- vi) **Creative problem solving:** It is presented as a series of processes or stages described as- problem finding, information finding, idea finding, solution finding and acceptance finding.



Lateral thinking: the approach defines vertical thinking as that based on developing logical linkages, while lateral thinking involves a complete shift in thinking or perception around the problem.


Inventive problem solving: this approach deals the intention of creatively invigorating the engineering design and problem solving domain. Creative problem solving: it is presented as a series of processes or stages described as problem finding, information finding, idea finding, solution finding and acceptance finding.


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**Process of Creativity Training**

Creativity training is conducted as the process stated below:

- i. problem construction or problem finding,
- ii. information gathering,
- iii. concept search and selection,
- iv. conceptual combination,
- v. idea generation,
- vi. idea evaluation,
- vii. implementation planning, and
- viii. action monitoring





What is the process of creativity training? It is conducted as the process which is stated like problem construction or problem finding. Gathering information about the problem, concept search and selection, conceptual combination, idea generation, idea evaluation, implementation planning, and action monitoring.

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The slide features a central yellow text box with the following content:

**The Difference Between Creativity and Innovation**

Creativity and innovation, while closely linked as part of a creation process, are not the same.

Creativity is subjective and isn't measurable, while innovation – at its most basic level meaning "new". It is measurable in the sense that an innovation is the creation of something new, whether it be a new product, idea or method.

The slide includes several decorative elements: a blue header, a white background with faint icons of gears, a lightbulb, a smartphone, and a molecular structure, and a dark blue footer with the NPTEL logo. A small inset image shows a person standing next to a tree whose foliage is made of green leaves. A video feed of a woman with glasses and a pink patterned top is visible in the bottom right corner.

Now, what is the difference between creativity and innovation. Though these two terms are closely linked as a part of a creation process, they are not the same. Creativity is subjective and is not measurable. While innovation at its most basic level “new”. It is measurable in the sense that an innovation is the creation of something new, whether it is a new product idea or method.

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The slide features a central yellow box with the title "Creative disruption aims at:" and a list of four bullet points. To the left, an orange arrow-shaped box contains the text "Aims of Creative Disruption". The slide is decorated with gear icons and a small image of a hand-drawn diagram. A video feed of a woman is visible in the bottom right corner. The NPTEL logo is in the bottom left corner.

**Aims of Creative Disruption**

**Creative disruption aims at:**

- Developing marketing messages which will be remembered and acted upon (which will improve performance/ROI of marketing expenditures).
- Improving brand perceptions and other market indicators (e.g., awareness, understanding, interest, engagement, etc.).
- Disrupting the flow of traditional marketing strategies to make existing business and marketing techniques obsolete.
- Creating new business innovations that lead to new markets and new marketing techniques.

Now, what are the aims of creative disruption creative disruption aims at developing marketing messages which will be remembered and acted upon which will improve performance return on investment of marketing expenditures. Improving brand perceptions and other market indicators. Example awareness understanding interest engagement etcetera.

Disrupting the flow of traditional marketing strategies to make existing business and marketing techniques obsolete. Creating new business innovations that lead to new markets and new marketing techniques.



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**Techniques of Creative Disruption**

Techniques involved in creative disruption are:

- Contrasting messaging
- Unusual or out of place presentation or placement
- Exaggerated presentation
- Intensely targeted messaging

The slide features a background with various icons including gears, a lightbulb, a brain, and a person. A small inset image shows a person's face in the bottom right corner. The NPTEL logo is visible in the bottom left corner.

The techniques that are used in creative disruptions are contrasting messaging, unusual are out of place presentations or placements, exaggerated presentations and intensely targeted messaging.

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**Creative Disruption in Business**

- Creative disruption in business has also been used as a general business term to denote instituting challenge (disruption) within a business to break old corporate habits.
- Every business continues to adjust to disruptions, as competitors respond to a business' unique offering.
- Creative disruption helps a business gain a competitive advantage by seeking tipping points for improvement before competitors replicate and/or improve upon the business model

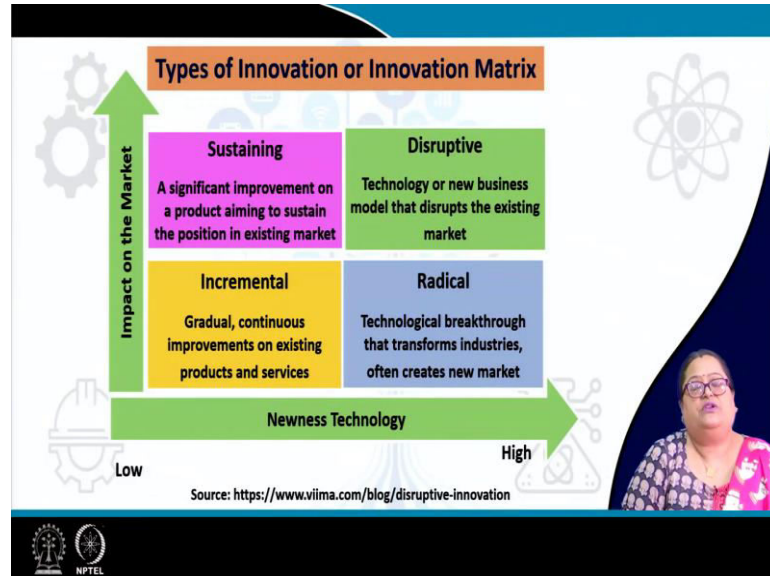
The slide features a background with various icons including gears, a lightbulb, a brain, and a person. A small inset image shows a person's face in the bottom right corner. The NPTEL logo is visible in the bottom left corner.

Creative disruption in business has also been used as a general business term to denote instituting challenge disruption within a business to break old corporate habits. Every business continues to adjust to disruptions, as competitors respond to a business unique offering. Creative disruption helps a business gain a competitive advantage by seeking



tipping points for improvement before competitors replicate and or improve upon the business model.

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The different types of innovation or innovation matrix. We can see like the newness of technology is the continuum which is running from low to high and the impact on the market is also running from the continuum of low to high. Now, when we see like the newness in technology is low and also the impact on the market is low, we have an incremental innovation which is incremental in nature, which is gradual, continuous improvements on existing products and services.

Innovation in which the newness in technology is low, but the impact on the market is high is called sustaining. It is a significant improvement on the product aiming to sustain the position in the existing market. When the newness in technology is high, but the impact in the market is low, it is called radical change. So, the innovation is taken to be radical in nature by technological breakthrough that transforms industries often creates a new market.

Where technological newness is high and also impact the market is high, this innovation is taken to be disruptive in nature. It is a technology or new business model that disrupts the existing market.

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**Types of Innovations**

The diagram in prepage is innovation matrix. It shows that innovation is to classify based on two dimensions: the technology it uses and the market it operates in.

Incremental innovations are just a little better than the previous version of the product or service.

Disruptive innovation is referred to the product, or a service that creates a new value network either by entering an existing market or by creating a completely new market.

The slide features a yellow paper ball on a clock face, a gear icon, a hard hat icon, and a chemical flask icon. The NPTEL logo is visible in the bottom left corner.

The diagram on the previous page is an innovation matrix. It shows that innovation is to classify based on two dimensions: the technology it uses and the market it operates in. The incremental innovation as we have understood is just a little better than the previous version of the product or service. Disruptive innovation is referred to the product or service that creates a new value network either by entering an existing market or by creating a completely new market.

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**Types of Innovations**

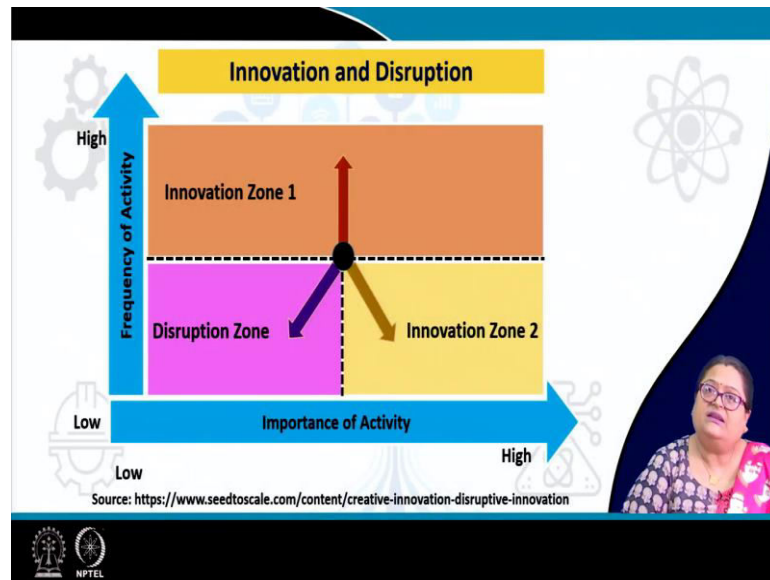
Sustaining innovation is the opposite of disruptive innovation as it exists in the current market instead of creating new value networks.

Radical innovation is rare as it has similar characteristics to disruptive innovation but is different in a way that it simultaneously uses revolutionary technology and a new business model.

The slide features a cardboard box with colorful blocks, a gear icon, a hard hat icon, and a chemical flask icon. The NPTEL logo is visible in the bottom left corner.

Sustaining innovation is the opposite of disruptive innovation as it exists in the current market instead of creating new value networks. Radical innovation is rare as it has similar characteristics to disruptive innovation, but is different in a way that it simultaneously uses revolutionary technology and a new business model.

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The link between innovation and disruption. So, this is also matrix where you find the there is an importance of activity which is from low to high and also the frequency of activity which is from again low to high. And we can classify the zone as companies being in innovative zone 1, innovation zone 2 or the disruptive. Now, what are the nature of these companies which are in innovation zone 1, innovation zone 2, and disruptive zone, let us discuss in details.

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**Innovation and Disruption**

The diagram on prepage shows that -

- Companies in Innovation Zone 1, i.e., frequency-led innovation create value by providing an easier and more convenient solution to a more frequent activity.
- Companies in Innovation Zone 2, i.e., importance-led innovation create value by providing a better solution to a problem and, thereby, increase the reliability and trust in the offerings.
- Companies in the Disruption Zone create value by providing a not-as-good solution to a problem at a lower price.

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The companies in innovation zone 1, that is frequency led innovation create value by providing an easier and more convenient solution to a more frequent activity. Companies in innovation zone 2, that is importance led innovation create value by providing a better solution to a problem and thereby, increase the reliability and trust in the offerings. Companies in the disruptive zone create value by providing not as good solution to a problem at a lower price.

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**Characteristics of Disruptive Innovation**

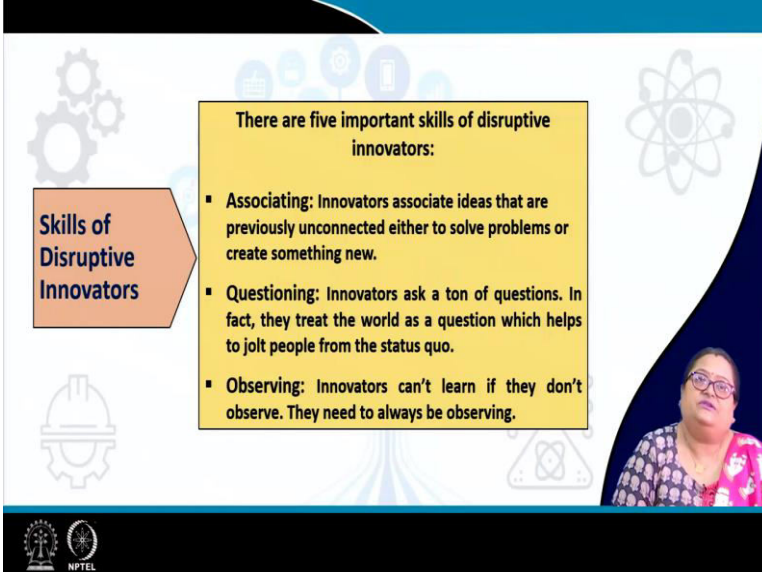
Characteristics of disruptive innovation:

- Lower margins, at least in the beginning
- Higher risks
- Either disrupts an existing market or creates a new market segment in the existing one
- Sales arguments and measures of value are usually fundamentally changed
- Often involves new technology and/or a new business model
- Happens slowly at first until reaches the mainstream after which grows exponentially

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Now, what are the characteristics of disruptive innovation? It is lower margins at least in the beginning, higher risks. Either disrupts an existing market or creates a new market segment in the existing one. Sales arguments and measures of value are usually fundamentally changed. Often involves new technology and or a new business model. Happens slowly at first until it reaches the mainstream after which grows exponentially.

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The slide features a central yellow box with the text: "There are five important skills of disruptive innovators:". To the left, an orange arrow points to the title "Skills of Disruptive Innovators". The background includes icons of gears, a lightbulb, a smartphone, and an atom. A small video inset in the bottom right shows a woman speaking. The NPTEL logo is in the bottom left corner.

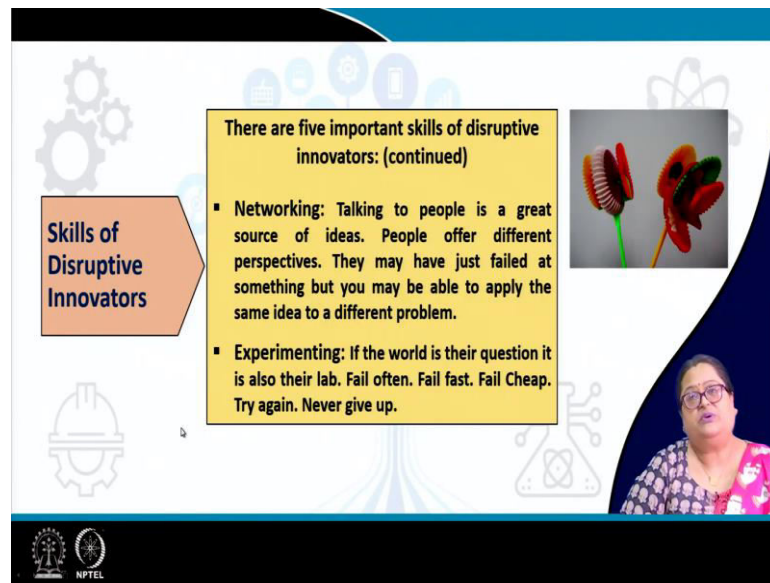
**Skills of Disruptive Innovators**

There are five important skills of disruptive innovators:

- **Associating:** Innovators associate ideas that are previously unconnected either to solve problems or create something new.
- **Questioning:** Innovators ask a ton of questions. In fact, they treat the world as a question which helps to jolt people from the status quo.
- **Observing:** Innovators can't learn if they don't observe. They need to always be observing.

Now, what are the skills of disruptive innovators? There are five important skills of disruptive innovators like; associating: innovators associate ideas that are previously unconnected either to solve problems or create something new. Questioning innovators ask a ton of questions. In fact, they treat the world as a question which helps to jolt people from the status quo. Observing: innovators cannot learn if they do not observe, they need to be always observing.

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**Skills of Disruptive Innovators**

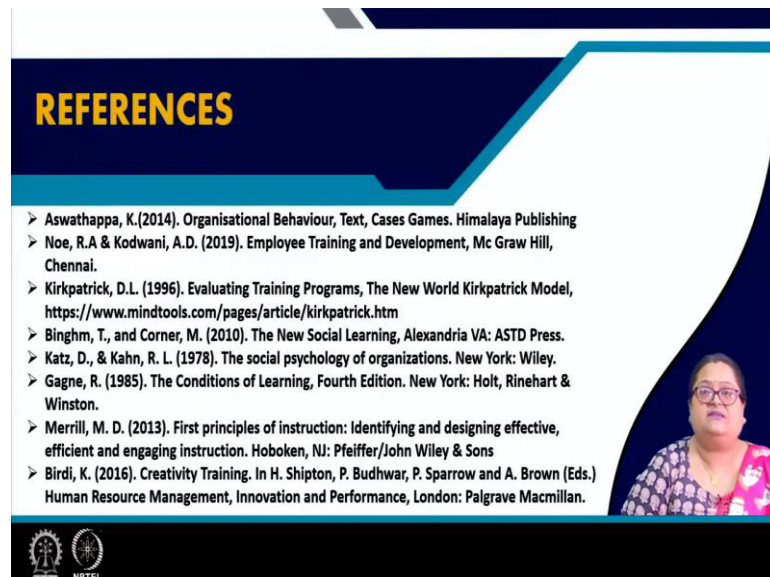
There are five important skills of disruptive innovators: (continued)

- **Networking:** Talking to people is a great source of ideas. People offer different perspectives. They may have just failed at something but you may be able to apply the same idea to a different problem.
- **Experimenting:** If the world is their question it is also their lab. Fail often. Fail fast. Fail Cheap. Try again. Never give up.

The slide features a yellow text box with a black border containing the text. To the right of the text box is a small image of three colorful hairbrushes (red, orange, and green). The slide also includes a small inset image of a woman in the bottom right corner and the NPTEL logo in the bottom left corner.

Networking: talking to people is a great source of ideas. People offer different perspectives. They may have just failed at something, but you may be able to apply the same idea to a different problem. Experimenting: if the world is their question, it is also to be their lab. Fail often. Fail fast. Fail cheap. Try again. Never give up.

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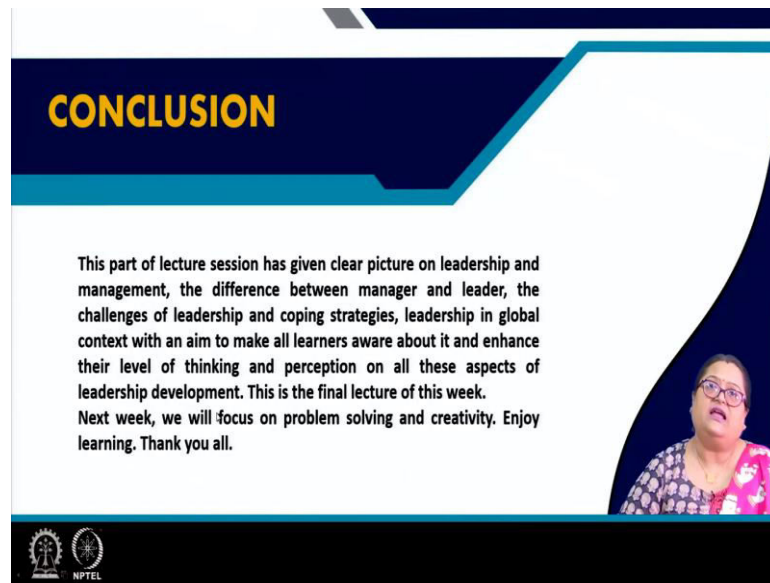
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The slide features a dark blue header with the word 'REFERENCES' in yellow. Below the header is a list of references. The slide also includes a small inset image of a woman in the bottom right corner and the NPTEL logo in the bottom left corner.




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**CONCLUSION**

This part of lecture session has given clear picture on leadership and management, the difference between manager and leader, the challenges of leadership and coping strategies, leadership in global context with an aim to make all learners aware about it and enhance their level of thinking and perception on all these aspects of leadership development. This is the final lecture of this week.

Next week, we will focus on problem solving and creativity. Enjoy learning. Thank you all.

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These are some of the references that we have used for this particular discussion. We hope this part of this session has helped us to understand the importance of disruptive thinking, creative ideas and innovation, disruptive innovation and more so the skills that are required for a disruptive thing innovator.

And the like the importance of creative thinking and creative training. Meet you in the next discussion session with some more ideas on disruption and the importance of training and development.

Till then thank you and bye.